

CONE EROSION PROTECTION FOR ROLLER CONE DRILL BITS

Abstract

A method of forming a drill bit structure, the method including fixing spacers to the drill bit structure. The spacers are arranged at preselected locations on an outer surface of the drill bit structure. A hardfacing material is then applied to the drill bit structure, and the spacers are removed. Holes are machined in the drill bit structure at the preselected locations, and drilling inserts are positioned in each hole.

A method of forming a drill bit structure, the method including applying a hardfacing material to selected surfaces of the drill bit structure. The hardfacing material includes a perforated carbide infiltrated material and a perforated powder infiltrated material. The perforations in the powder infiltrated material correspond to the perforations in the carbide infiltrated material. Holes are machined in the drill bit structure at the locations of the perforations, and drilling inserts are positioned in each hole.

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